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10/734,805	12/11/2003	Akio Matsubara	6453P021	3908

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EXAMINER

HUNG, YUBIN

ART UNIT	PAPER NUMBER
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2624

MAIL DATE	DELIVERY MODE
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06/04/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/734,805

Applicant(s)

MATSUBARA, AKIO

Examiner

Yubin Hung

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/11/03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/11/03, 12/08/06, 03/14/07</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Drawings***

1. Figures 1-6 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

2. Claim 1 is objected to because of the following informalities:

- Claim 1, line 5: "allowallowing" should have been "allowing"

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claims 1, 9, 10, 12 and 13 all recite the limitation "the extracted image file" in their respective last line. There is insufficient antecedent basis for this limitation in the claims. (Note that it is a plurality of blocks that are extracted.) Claims 2-11 inherit this problem and are similarly rejected. (Note also that claims 9 and 10 contain the same limitation.)

6. Claim 13 recites the limitation "the JPEG 2000 format" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

In addition, the USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), ANNEX IV, partly reads as follows:

First paragraph

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structure and computer programs which impart functionality when employed as a computer component. ...

Second paragraph

Both types of "descriptive material" are nonstatutory when claimed as descriptive material per se. ...

Section (a), second paragraph, beginning at line 7

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowery, 32 F.3d at 1583-84, 32 USPQ2d at 1035. ...

8. Claim 13 is rejected under 35 U.S.C. 101 because the claimed inventions are directed to non-statutory subject matter as follows. Claim 13 recites a *storage medium*. Since the storage medium is not necessarily a computer-readable medium, the invention of claim is not statutory subject matter.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parker et al. (US 7,106,366), Hagiwara et al. (US 7,065,751) and APA (admitted Prior Art: Figs. 1-6, PP. 2-3, paragraphs 7-9 and PP. 9-13, paragraphs 29-44).

11. Regarding claim 1, and similarly claims 12 and 13, Parker discloses

- a compression unit to perform a compression process on an image using a JPEG 2000 format  
[Fig. 4, ref. 406; Col. 10, lines 14-16]
- a decompression unit to perform a decompression process on an image compressed using a format other than the JPEG 2000 format  
[Fig. 4, refs. 219 (compressed image) & 404 (decompressor); claim 5 on Col. 20 (non-JPEG 2000 compression)]
- a compression execution unit (that) decompresses the image file by use of the decompression unit before compressing the image file using the JPEG 2000 format by use of the compression unit in a case where (the determination unit determines that) the image file corresponds to a compressed file compressed using a format other than the JPEG 2000 format  
[Fig. 4, ref. 400 (the compression execution unit); Col. 9, line 66-Col. 10, line 16. Note that the determination unit is taught by Namizuka, see below]

Note that the compression execution unit [Fig. 4, ref. 400] has the capability of JPEG 2000-compressing uncompressed images (see Fig. 4, refs. 405 and 406). In addition, in Fig. 2a, ref. 206 of Parker further discloses compressing an image file using the JPEG 2000 format for non-compressed image files (see also Col. 4, lines 13-15; Col. 20, claim 6). Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the compression execution unit as disclosed in Fig. 4 to separately receive and JPEG 2000-compress un-compressed image files. The

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motivation would have been to give the unit additional capability, namely to be able to perform JPEG 2000 compression of uncompressed file, in addition to transcoding.

Parker does not expressly disclose the following, but Hagiwara does:

- a determination unit to determine that the image file corresponds to at least one of a non-compressed file and a compressed file compressed using a format other than the JPEG 2000 format [Fig. 1, ref. 2 (determination unit); Fig. 3, refs. 48 (indicating whether a file is compressed or not) & 52 (indicating the compression mode); Col. 1, line 65-Col. 2 line 8; Col. 5 lines 7-14. Note that per Fig. 5 and Col. 5, lines 24-41, the CPU is considered the determination unit]

Parker is combinable with Hagiwara because they both have aspects that are from the same field of endeavor of compression/decompression. At the time of the invention, it would have been obvious to modify Parker with the teaching of Hagiwara so that information regarding a file's compression status and compression mode are recorded and later determined for decompression. The motivation would have been to be able to decompress (or not decompress, if uncompressed) a file correctly, as Hagiwara indicates in Col. 1, line 64-Col. 2, line 5.

The combined invention of Parker and Hagiwara does not expressly disclose the following, which is taught by APA

- an extraction output unit to extract from the compressed image file compressed by the compression unit a plurality of blocks corresponding to a region of interest designated by the designation allowing unit, and outputting the extracted image file [P. 3, lines 1-2]

The combined invention of Parker and Hagiwara is combinable with APA because they both have aspects that are form the same field of endeavor of compression.

At the time of the invention, it would have been obvious to modify the combined invention of Parker and Hagiwara with the teaching of APA as recited above. The motivation would have been to be able to improve communication speed and memory consumption, as APA indicates in P. 3, lines 2-5.

Therefore it would have been obvious to combine Parker, Hagiwara and APA to obtain the invention as specified in claim 1.

12. Regarding claim 2, note that JPEG 2000 allows for both lossy and lossless compressions and Official Notice is taken that lossless compression such as run-length encoding is well known and widely used in the art, and the motivation for using it would have been to preserve all information of the image.

13. Regarding claims 3 and 6, note that JPEG 2000 allows for both lossy and lossless compressions and Official Notice is taken that lossy compression such as DCT is well known and widely used in the art, and the motivation for using it would have been to reduce the size of the data.



14. Regarding claims 4 and 5, APA further disclose the use 5x3 filter bank (claim 4) and 9X7 filter bank (claim 5) [P. 12, last four lines of paragraph 40].

15. Regarding claims 7 and 8, APA further discloses processing ROI in block units of tiles and precincts (and therefore would have been obvious to extract ROIs in such block units) [P. 2, paragraph 8].

16. Regarding claim 9, since in JPEG 2000 an image is usually coded at multiple resolution levels, it would have been obvious to extract the ROI only at the desired resolution (i.e., to adjust the resolution to the desired level); for example, it is well known and widely used in the art to only extract the ROI at the lowest resolution level for display as a thumbnail.

17. Regarding claim 10, note that JPEG 2000 supports arranging data in different progressions such as precinct-color component-resolution (e.g., see Fig. 1, ref. 12 and paragraph 35 of Wee et al.: US 2005/0084132) and it is well known in the art that many monitors are monochrome in nature. Therefore it would have been obvious to extract monochrome images only (e.g., the green component of a color image) in order to display on such monitors.

18. Regarding claim 11, note that JPEG 2000 supports progressive transmission (and display) of images and (e.g., see Fig. 1, ref. 12 and paragraphs 32 and 35 of Wee

et al.: US 2005/0084132) progressions that also include layers (representing different image details); therefore it would have been obvious to extract and output successive layers so that the transmission of layers can be terminated once the desired image details have been received and displayed. In this way the computing (such as required for extraction and decoding) and transmission cost can be reduced.

### ***Conclusion and Contact Information***

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

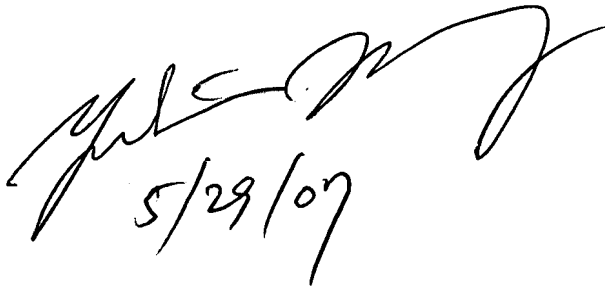
- Easwar (US 2004/0008897) – discloses transcoding from JPEG to JPEG 2000 [Figs. 3 & 4B]
- Wee et al. (US 2005/0084132) – discloses JPEG 2000 bit stream syntax such as progression order [Fig. 1, ref. 12; paragraphs 32-35]
- Sato (US 6,985,632) – Discloses extracting ROI [Fig. 22, refs, 601 & 605; Fig. 23, ref. S205; Col. 17, lines 25-30 & 47-50]
- Dekel et al. (US 6,314,452) – discloses extracting and encoding ROIs with thumbnail at the lowest resolution [Fig. 10]
- Joshi et al. (US 6,987,890) – discloses determining ROI in JPEG 2000 compression [Fig. 11]
- Atsumi et al. (US 6,891,973) – discloses selecting and transmitting ROIs [Fig. 11]

- Cui (US 6,731,290) – discloses determining compression mode and decompress accordingly [Figs. 3, 4B & 4C]
- Lee et al. (US 6,870,962) – discloses determining compression mode and decompress accordingly [Figs. 8 & 10]

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yubin Hung whose telephone number is (571) 272-7451. The examiner can normally be reached on 7:30 - 4:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew C. Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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21. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



5/29/07

Yubin Hung  
Patent Examiner  
Art Unit 2624  
May 29, 2007